

Georgia Tech Research Corp. Invention Disclosure Form

OTL USE ONLY

Georgia Institute of Technology
Office of Technology Licensing
Mail Code: 0415
505 10th Street, N.W.
Atlanta, GA 30332-0415

Login Date:
GTRC ID:
Assigned to:

Please complete all items and return to the above address. If you have any questions, please call (404)894-6287.

Title

Title of Invention Pervasive Asthma Monitoring System

Short Title PAMS

Previous Invention

Is this invention related to a previous invention disclosed to the OTL? Yes ☐ No ☒

If yes, Title:
GTRC ID:

Inventors

- ❖ Inventors should include only those persons that are believed to have contributed to the concepts included in the invention. Please make your best effort at this time to include all inventors. Should OTL proceed with patent filing, patent counsel will separately investigate and make a final legal determination of inventorship of patent applications in accordance with applicable patent laws.
- ❖ The "Contribution %" should reflect each inventor's contribution to the concepts of the invention and be agreed upon by all inventors. (If the inventors cannot agree to contribution percentages, the OTL will assume an equal distribution.)
- ❖ **Use additional sheets as necessary.**

Full Name: Jiten Chhabra

Citizenship: Indian

Title: Dr.

Department: College of Computing

Mail Code: 30318

Contribution %: 95

Office Address:

Home Address: Graduate Living Center, 301 Tenth Street NW, 604 B
Atlanta Georgia 30318

Phone:

Phone: 404-630 3787

Fax:

Fax:

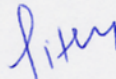
Email:

Email: jc470@gatech.edu

Execution by Inventor(s):

I/We inventor(s) hereby solemnly swear and affirm under oath that I/we am/are the only inventor(s) of this invention and that I/we have not knowingly omitted the inclusion of any other inventor(s) besides me/us, and that the information provided in this disclosure is, to the best of my/our knowledge, true and accurate.

Signature:



Date: 12/10/07

Full Name:

Citizenship:

Title:

Department:

Mail Code:

Contribution %:

Office Address:

Home Address:

Phone:

Phone:

Fax:

Fax:

Email:

Email:

Execution by Inventor(s):

I/We inventor(s) hereby solemnly swear and affirm under oath that I/we am/are the only inventor(s) of this invention and that I/we have not knowingly omitted the inclusion of any other inventor(s) besides me/us, and that the information provided in this disclosure is, to the best of my/our knowledge, true and accurate.

Signature:

Date:

Full Name:	Citizenship:	
Title:	Department:	
Mail Code:	Contribution %:	
Office Address:	Home Address:	
Phone:	Phone:	
Fax:	Fax:	
Email:	Email:	
Execution by Inventor(s): I/We inventor(s) hereby solemnly swear and affirm under oath that I/we am/are the only inventor(s) of this invention and that I/we have not knowingly omitted the inclusion of any other inventor(s) besides me/us, and that the information provided in this disclosure is, to the best of my/our knowledge, true and accurate.	Signature:	Date:

Invention Description

Brief Description:

Pervasive Asthma Monitoring System is a comprehensive solution to monitor the health of asthma patients after they have left the hospital. PAMS utilizes commonly available inexpensive portable music players to transfer the patient's respiratory data to their healthcare professionals on a 24*7 basis. By integrating this new technology with the existing methods of monitoring asthma PAMS results in a system which is guaranteed to result in decreased episodes of asthma attacks.

The patient wears a mp3 player around his / her neck which constantly records breath sounds. This data is then transferred using GSM or Bluetooth to a computer. Breath sounds are then analyzed using a voice analysis algorithm which identifies wheeze frequencies from the background noise. A mobile phone is programmed to record expected adverse effects to medication on command. All this data is then integrated with other inputs and sent to the hospital end using GSM to be represented on the hospital interface. All incoming data is displayed on an easy to use and intuitive hospital interface from where it is constantly monitored.

(PLEASE ATTACH MORE DETAILED DESCRIPTIONS, ANY SUPPORT MATERIALS, REPORTS AND PROPOSED PUBLICATION).

Source of Support

Did this invention result from sponsored research? ☒ Yes ☐ No

If NO, how was this work funded, including salaries, charges of time, materials, supplies, equipment?

If YES, please provide information on all:

Sponsor: Health Systems Institute

GIT Project Number/PeopleSoft No.:

Sponsor:

GIT Project Number/PeopleSoft No.:

Was this project funded through a Center with Industry Membership? For example, PRC, IPST, GEDC, etc.

☐ Yes ☒ No

If YES, list name of Center. _____

Did you use any material obtained from another party in developing this technology?

☐ Yes ☒ No

If YES, please provide all appropriate licenses and agreements.

Establishment of Invention History

❖ Please provide your best estimate for the date when the following occurred (will occur):

Date:(mm/dd/yy)	
05/12/07	A. Conception of Invention
09/25/07	B. First written description (please attach a copy if available)
10/02/07	C. First non-confidential disclosure (e.g. abstract, proposal, paper submission, talk, or meeting with industry – please attach a copy if available) To whom: Health Systems Faculty
10/23/07	D. Completion of model or prototype

F. Is a publication, paper, or other disclosure planned within 6 months? ☒ Yes ☐ No

If YES, Disclosure Date: 04/15/07

Type of disclosure: Business Plan

Prior Art

Please conduct a literature and patent search and attach a list of all relevant patents and publications. Two useful sites for patents searches are:

- 1) www.uspto.gov.patft/index.html
- 2) www.surfilp.gov.sg

Please explain differences or advantages over prior art.


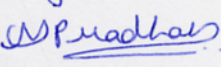
Commercialization Potential

- A. What are the commercial applications for the invention?
There is a tremendous scope for commercializing this concept in both the developing and the developed countries. Target audiences would be healthcare institutions, individual patients, insurance companies, government bodies and educational establishments. The general concept of ubiquitous and pervasive health to empower patients is something that has already started to appear in the markets.
- B. What are the limitations that must be overcome prior to practical application?
The exact mechanism of digital signal processing to detect the wheeze from the background noise and HIPPA compliance on transferring of medical data are the two main challenges that I envision towards in commercialization.
- C. What are the advantages of the invention versus present technologies?
The wheezometer is bound to be more sensitive and specific than the current gold standard – The Peak Flow Meter.
- D. Please provide any available data or information on market potential/size.
Asthma ranks among the most common chronic conditions in the United States, affecting an estimated 14.9 million persons in 1995 and causing over 1.5 million emergency department visits, about 500,000 hospitalizations, and over 5,500 deaths. The estimated direct and indirect monetary costs for this disease totaled \$11.3 billion in 1998. Currently over 20 million Americans suffer from asthma. According to WHO estimates, 300 million people suffer from asthma and 255 000 people died of asthma in 2005.
- E. Is work on the invention continuing? ☒ Yes ☐ No If Yes, please provide source of on-going funding.
I am developing it as a business plan in the management courses.
- F. Do you know of any appropriate industrial organizations that may be interested in licensing this technology? (Please attach additional sheet if more space is required.)

Company Name	Contact Person	Contact Information
CDC		
Humana		
Kaneva.com		

Execution by Witnesses

❖ This disclosure should be witnessed by two individuals who are not co-inventors and who are technically qualified to understand the subject matter.

	Print Name	Signature	Date
I have read this invention disclosure (including the attached pages, if any) and understand its subject matter	JASJIT SINGH		12-14-2007
I have read this invention disclosure (including the attached pages, if any) and understand its subject matter	NEIL PRADHAN		12-14-2007